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MANAGEMENT AUDIT
of the
METHODS AND STANDARDS FUNCTION

by

Keith Comrie
City Administrative Officer

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MAYOR

February 11, 1980

The Honorable Council
of the City of Los Angeles

The Honorable Tom Bradley
Mayor of the City of Los Angeles

Transmitted herewith is the Report on the Management Audit of the Methods and Standards Function in the City of Los Angeles. The Audit was initiated in the normal course of events in furtherance of City Charter Section 53 for the purpose of evaluating the efficiency and effectiveness of the function, specifically from the standpoint of its continuing contribution to the productivity of City government. In addition, the need for expanded formal effort to improve productivity on a City-wide basis has been examined.

A copy of this report was made available in draft form to each department/bureau which now utilizes methods and standards personnel, and to the Personnel Department. All comments received were reviewed and we have attempted to address all concerns in this final report.

This Management Audit was supervised under my direction by John R. Coombs, Assistant City Administrative Officer, and Al M. Beuerlein, Chief Administrative Analyst. Members of the Audit Team were: Russell E. Johnson and Leonard D. Tupper.

K. Comrie
Keith Comrie
City Administrative Officer

KC:AMB:gje

cc: Each Member of the City Council
General Manager, Department of
Recreation and Parks
General Manager, Department of
Transportation
General Manager, Department of
General Services
President, Board of Public Works
General Manager, Personnel Department

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INTRODUCTION

Beginning in the early 1960's, a number of City departments developed work measurement programs based on the application of engineered time standards to work that was essentially labor-intensive and repetitive in character. The primary consultant assisting the City in developing the installations was the H.B. Maynard Company. The system installed was based on Methods-Time-Measurement (MTM) standards. The main installations occurred in the Bureau of Street Maintenance, the former Bureau of Fleet Services, the Department of Recreation and Parks, and the Department of Transportation (Traffic). Other departments and/or bureaus which have utilized work standards to a lesser degree include the Bureau of Sanitation, the former Bureau of Public Buildings and the Harbor Department. The Department of Water and Power recently analyzed the performance and management of its Power Design and Construction Division and used work sampling and measurement techniques in developing a work output and personnel utilization reporting process.

The number of personnel directly involved in work measurement programs peaked in about 1970-71 with 75 staff and has been gradually decreasing since that time with 40 staff presently assigned.

SUMMARY

It is apparent that a major challenge to the City government of Los Angeles for the 1980's and beyond, as dramatically underscored by the success of the recent tax and appropriation limitation initiatives, is to substantially improve the utilization of its resources, and specifically, the productivity of its workforce. To this point in the history of the City, only a fraction of the total workforce has been addressed by formal work measurement techniques. From this point forward, a dramatic increase in the level of commitment is required if this critical challenge is to be met. Each opportunity for improvement must be carefully examined and aggressively pursued.

The methods and standards efforts in various Council-controlled departments are not contributing as significantly as they could be to productivity improvement. There is a clear need for revitalization of these efforts in the departments which retain methods and standards personnel and elements of formal programs. There is also a great need for expansion of methods and standards techniques into departments and activities of City government which have not previously been measured. The recommendations contained in this report are aimed at providing new emphasis and encouragement to the managers of City departments to be innovative in their management practice with a view to providing quality service at minimum cost.

With some exceptions, the original work standards installed during the 1960's are still being used. The use of basic Methods-Time-Measurement for developing work standards for most City operations produces standards which are sometimes much more precise and costly to develop and update than they need be. Other work measurement techniques are available which can be used to develop and maintain standards more quickly and economically.

There is great potential for productivity improvement in many of the City's departments and bureaus. By improving work methods, procedures, manual and automated systems, equipment and materials availability, significant productivity gains are possible. Development of reasonable work standards for many city activities is an achievable and desirable objective.

There is an impelling need for a coordinated productivity improvement effort in the departments of the City. The approach advocated by this Office includes the following as basic elements:

1. Decentralized methods and standards personnel assigned to certain departments on the basis of specific justification (as described below), and responsible directly to the department manager.
2. Department budgetary commitment to specific productivity improvement projects. Projects to be proposed by department managers in the annual budget formulation process, and approved/disapproved as part of the City Budget. The accumulation of all such approved projects will constitute a major element in overall City productivity efforts.
3. Post-evaluation of productivity projects by the City Administrative Officer in cooperation with departments to assess project effectiveness and future potential.
4. Formation of a small staff group, from existing resources, within the Office of the City Administrative Officer to work with departments in the identification of productivity projects and appropriate methods and standards techniques, provide post-evaluation of projects as referenced in paragraph number 3 above, and provide general oversight, coordination and support for the entire productivity improvement effort.

RECOMMENDATIONS

It is recommended that the Mayor and Council:

1. Issue a major joint policy statement expressing official commitment to improving the productivity of employees throughout City government, and referencing the Mayor's directive to the City Administrative Officer cited in Recommendation No. 2 below.

It is recommended that the Mayor:

2. Issue an Executive Directive concurring in a large-scale decentralized productivity effort, as described in this report, wherein department managers will assume direct responsibility for the initiation, development and implementation of productivity improvements in the context of the budgetary process; and direct the City Administrative Officer to assist as discussed and set up an annual justification/results reporting system tied to the budget process.
3. Instruct the General Manager of the Personnel Department, in cooperation with concerned department managers and the City Administrative Officer, to evaluate the continuing appropriateness of the Methods and Standards Technician classification series in the light of the approach described in this report.

FINDINGS

The Methods and Standards Approach

An explanation of the Methods and Standards (M&S) approach to greater efficiency appears in order at the outset. Basically, "Methods" relates to methods improvement studies, which involve the analysis and improvement of work methods by eliminating unnecessary work elements, and improving other factors relating to the work, such as equipment, materials, tools and operator training. The "Standards", also referred to as work standards, time standards or standard times, are determined through the use of time measurement techniques. A standard time represents the amount of time required to perform the work. It is the time determined to be necessary for a qualified individual with average skill and exerting average effort to perform a defined amount of work when following a prescribed method.

Both methods improvement studies and time standards are beneficial if properly used. In most instances, implementation of study recommendations will result in productivity improvements--either less staff for the same amount of work or more work product from a given staff. Other beneficial uses of such studies include the use of time standards for scheduling of work, and the planning and staffing of organizations.

A broad range of work measurement techniques is available for use in developing time standards. Some techniques are very simple and some quite complex. The specific technique selected for use depends upon factors such as the time, effort and skills needed to gather required data, and the desired accuracy of the resulting time standard.

- (1) One of the simplest techniques is the use of historical data to establish a standard based upon the amount of time required to perform a task during previous time periods.
- (2) An effective and relatively simple type of work measurement technique to use in many situations is the work-sampling study. This technique is a statistical sampling (random spot checks within work groups) employed to determine average work standards for staff.

- (3) A more precise type of work measurement is the time study in which a stop watch is used to determine the time required for performing all tasks by trained sample groups of employees. During a time study, performance rating adjustments are made to adjust the observed times to what is considered to be a standard work pace.
- (4) Another precise measurement technique is the pre-determined time system. In such a system, all work activity is analytically subdivided into the basic elements required for their performance, and pre-determined (from engineering books) time values are assigned to the basic elements. Because of the higher degree of detail involved, standards developed through time study and the use of pre-determined times systems are commonly referred to as "engineered time standards".

For the most part, the time standards which were installed in the City M&S programs used a combination of (3) and (4). In future years there should be greater application of a variety of proven techniques.

General Observations on City Experience

Methods and standards programs in City departments have the potential for dramatic productivity increases. Initial support for the use of standards programs appears to have existed among department and bureau managers, however, the absence of positive reinforcement in the form of educational and training efforts and the personnel turnover at all levels of management and supervision have resulted in the present condition of relatively limited use. Since the installations were made on a departmental basis, direction has been by the individual departments involved. There has been no overall programmatic direction from a City-wide perspective. Full central and line management support for methods and standards programs is critical if such programs are to have success.

There have been varying degrees of success in the City's methods and standards programs. With few exceptions, the original work standards in the 1960's are still being used in those departments which continue to maintain some form of program. Routine audits of the functions covered by standards have generally not been made and most standards have not been updated to reflect current work methods or equipment in use. The standards used for performance reporting do not provide necessary flexibility so that temporary adjustments may be made conveniently in work crew sizes by field supervisors to more effectively accomplish work at certain job sites.

Worthwhile benefits have been realized in all host departments through methods improvement studies. Implementation of some recommendations have resulted in significant dollar savings achieved through personnel reductions or improvements in methods or procedures. Initially, the application of work standards served to establish a higher level of work performance. Work standards are currently being used for performance reporting, for daily or weekly scheduling of work, and in some instances for budgeting and planning purposes.

Historically, too much time has been spent in the manual preparation of work performance reports by M&S Technicians. Except in the case of the Transportation (Traffic) Department, where an automated standards reporting system was developed, much of the effort expended by the Technicians in standards application is clerical in nature.

With the exception of the Department of Recreation and Parks, few additional departmental operations have been analyzed, improved, and provided with standards by the M&S units through the years subsequent to the original installations. The basic MTM system is an appropriate work measurement technique for use in some industrial operations, especially in high volume production line operations in manufacturing plants. The use of basic MTM for developing work standards for most City operations, and especially for field operations, produces standards which are much more precise than they need be. It takes a considerable amount of time to develop and update standards using basic MTM, consequently the system is expensive. Many other work measurement techniques are available which can be used to develop standards more quickly and economically. Such techniques have not been employed by the M&S units in the City, however, due to the lack of specific knowledge regarding them.

Management in some departments has used the technical expertise of M&S Technicians to advantage to improve operations. In some instances, however, the technicians have been used on project assignments which were completely unrelated to productivity improvement and inappropriate for their job classification. In other instances, M&S personnel have not always been assigned to projects which they were capable of fulfilling.

Work Performance Reporting

There has been a tendency in the City methods and standards programs to place excessive emphasis upon the application of standards for the purpose of generating work performance reports. The performance reports indicate, in terms of percentages, the actual hours worked by individuals or crews compared to the standards which have been applied for that work. There are several problems with the reports produced under this system.

Because of the relatively high turnover of field supervisors and the limited training available to newly appointed supervisors regarding the proper method of reporting work actually performed, the input data used for calculating work performance reports is frequently incorrect. As a result, the information contained in some reports has proven to be of limited value to management.

In summary, the original work standards have lost much of their value through the years. Because they have not been periodically audited and updated, the standards being applied today oftentimes do not fit the job conditions. As a result of this turn of events, and inaccuracies in the reporting of work performed, performance reports are many times not an effective technique for monitoring or controlling work accomplishment.

Some of the existing standards in the City will be useful if they are reviewed and updated to reflect current conditions, i.e., the current work methods, equipment and materials in use. Validated standards should be helpful to line supervisors, staff support personnel and management personnel for daily or weekly work scheduling, and for planning and budgeting purposes. Currently, there are several worthwhile uses being made of standards. As an example, they are used in the Department of Recreation and Parks for the establishment of routes for employees performing grounds maintenance and custodial work. The generation of backlog reports in the Bureau of Street Maintenance, and the use of validated existing standards for the weekly scheduling and coordinating system used in the Transportation (Traffic) Department are further examples. Existing work standards should be validated and used wherever the use is considered worthwhile by management.

Methods Improvement Studies

Since most of the significant productivity gains made in the City in past years have resulted from methods improvements, the major emphasis in the future should be shifted from standards application to conducting methods studies.

Numerous problem areas were observed in the departments and bureaus which were contacted during this audit. The magnitude of many of the problems is such that the potential for increasing productivity by improving work methods, equipment availability, and delivery of materials is much greater than the benefits which could be achieved through continuing to generate performance reports. In the Bureau of Street Maintenance, for example, supervisory personnel have stated that the productivity of street repair crews is not always at its best because sufficient amounts of equipment of the proper types are not always available when needed. The inability to provide sufficient quantities or timely delivery of bituminous materials and ready-mixed concrete products also is a problem. When solutions are worked out to correct these deficiencies, further improvements in productivity can be achieved.

The General Manager of the Department of Recreation and Parks has stated that methods and standards personnel are presently assigned to some of the problem areas observed by the Audit Team, including equipment placement and availability, spare parts availability (purchasing, stocking and distribution), and supplies and materials availability. While such assignments appear consistent with the direction identified as desirable by this audit, there is a question remaining as to the personnel qualifications required to achieve anticipated results in these long-term problem areas.

In the Transportation (Traffic) Department, studies have been conducted to improve sandblasting operations. The

organization and working hours of crews and the methods of application of thermoplastic materials on streets have also been analyzed and improved. Methods improvement studies previously conducted in the Department have indicated that it is less costly for the City to use thermoplastic materials for street markings than to use conventional types of street marking paint.

There are many other areas for improvement in City departments and bureaus which currently have M&S personnel. Action should be taken by the general managers and directors of these organizations to determine the relative priority of potential areas for productivity improvement, and to assign some of their best qualified M&S personnel to conduct studies in the problem areas and make recommendations for improvement.

Productivity Improvement Potential

The need for increased emphasis on productivity improvement in the City goes beyond merely revitalizing the existing methods and standards programs. A different approach should be used in the future to attain maximum benefits. The potential for improvement in the City is great. A previous study in 1975 of work measurement activities in the City indicated that roughly 75 percent of the City budget is directly related to the cost of labor, but only 20 percent of the City's work suitable for analysis had been measured to date. It was speculated that if only a one percent reduction in the cost of improvable labor was attained through a productivity improvement program, the cost of City operations could be reduced by approximately 2.6 million dollars each year. This is a most conservative estimate and is cited merely to illustrate the scale of possible impact. In a properly managed program, much higher savings could be realized.

Many City departments are engaged in labor-intensive activities which hold great apparent potential for productivity improvement, including the Department of General Services, Library Department, Department of Building and Safety, Department of Public Works (various bureaus) and the Police Department. In addition, there are viable techniques now in use which may be applied to functional categories of work, such as clerical, engineering design and administrative. These techniques have potential broad application in City government. Because of the significant potential for productivity improvement in the City and the ever increasing public pressures to reduce the cost of government operations, it is recommended that the Mayor and the City Council issue a joint policy statement expressing an official commitment to improving the efficiency and effectiveness of City government. See Recommendation Nos. 1 and 2.

Job Requirements for M&S Technicians

The City classification, Methods and Standards Technician, and related positions were originally established at the time MTM work standards programs were introduced into the City. Consultant personnel possessed technical expertise in developing work standards using the basic MTM measurement techniques, but they were not familiar with the manner in which various tasks were performed by City employees in areas where the standards were to be installed. In order to provide the detailed information about work methods at that time, the Methods and Standards Technician job classification was established. The requirements allowed currently employed maintenance and craft employees in the City to qualify as M&S Technicians if they had at least two years of experience in the specific division within the department or bureau in which the standards were to be developed. Thus, a task force consisting of consultant employees with technical expertise in developing standards, and selected City employees knowledgeable in the work methods involved, was formed for each installation prior to beginning standards development. The M&S Technicians were trained in basic MTM techniques subsequent to their appointment.

The use of City employees with specific knowledge of work methods in each task force was, of course, an expedient for the consultant when the standards programs were being installed. Through the years, the continuing use of the M&S class has not always provided personnel with the most appropriate qualifications to staff the M&S Sections. A serious problem arose in the salary relationships between the M&S series and other departmental positions in 1970. At that time, the salary levels of the craft and maintenance employees in the departments increased, but those of the M&S series did not. As a result, there was no continuing incentive for employees with prior experience in the jobs covered by standards to become M&S Technicians. The qualifications for taking M&S examinations were relaxed, and today most newly appointed Technicians have no previous craft or trade experience and little background in work measurement or methods improvement techniques.

Another problem with the M&S classification is that the job requirements are basically inappropriate. A dichotomy exists wherein the requirements and salary level are too high for some of the work and too low for other work. For the application of standards and the preparation of performance reports, the requirements are too high. In most M&S programs in the City this work is a routine manual operation which would more appropriately be performed by lower level personnel. On the other hand, the requirements appear too low for conducting methods improvement studies. Although some of the M&S personnel have participated in studies which have resulted in significant benefits, it is believed that the current requirements will not satisfy this need

in future years. Increased emphasis should be placed on methods improvement studies in the future.

It is generally recognized both in governmental agencies and in private industry that personnel hired to conduct methods improvement and other analytical studies, and to develop and implement work control systems should to have a sound academic background which generally includes graduation from college. Some organizations attempt to recruit only persons with graduate degrees for this work. Other key requirements generally considered necessary include basic analytical ability, a good mathematics background, and interpersonal skills. Currently, the City of Los Angeles requirements for M&S Technician call for only two years of college and two years of experience in work relating to administrative engineering, construction inspection, or maintenance or repair activities. Since additional experience may be substituted for the educational requirement on a year for year basis, persons with no college training can become M&S Technicians in the City. Based on the City's experience, continuing to recruit M&S Technicians will not provide personnel with the appropriate background to conduct a broad range of analytical studies, or to adequately perform some of the other tasks which will be required to improve productivity in the City in the future. However, it is conceivable that in the future a combination of skills, both professional and technical, will emerge as the preferred method of staffing the City's productivity efforts. See Recommendation No. 3.

Productivity Programs in Other Governmental Agencies

Other MTM Standards Installations in California Government

Representatives in six separate city and county governments in California were contacted. These agencies had implemented standards programs very similar to those which were installed in the City of Los Angeles.

The degree of success achieved by the surveyed MTM installations varied widely. It was reported that two of the efforts were a failure, while four achieved moderate to dramatic success. In two agencies -- a city parks department and a county road department -- the MTM programs were completely discontinued and replaced by other systems of work standards determined to be more appropriate. In the parks department, standards are now developed by supervisors. In the road department, a different system was installed in which the method of developing standards is much less precise, but much faster. In this new system the standards personnel work closely with line supervisors in developing standards, and a simplified reporting system is used.

In the third agency, a city street maintenance installation, the MTM standards are still being used, but the performance reports established by the consultant were discontinued because they proved to be unproductive. The MTM technicians in the agency are essentially schedulers who work closely with the field supervisors in developing work standards.

In the fourth agency, a county facilities maintenance division, the MTM standards and conventional performance reports are still being used. It was reported that the standards are outdated and the performance reports are of limited value. This agency obtained MTM standards from the U.S. Navy for some operations. Those standards are also outdated because neither the Navy nor the county agency has updated them. KEE Company custodial standards are used for building maintenance. When the custodial standards became outmoded, they were updated by contract with the KEE Company. The division head in this organization plans to employ a local consultant with expertise in MTM standards to update existing standards and possibly develop additional ones.

The fifth agency, the City of Riverside, reported that the original MTM standards have been adequately maintained by the methods and standards technicians and the programs apparently are beneficial. Riverside's experience has been fortunate in that most of the original technicians have been retained. Standards programs have been installed in the Public Utilities Department

and in Street Maintenance, Recreation and Parks and Sewer Maintenance. In addition to using the basic MTM-1 Standards, this program also uses the Maynard Operation Sequence Technique (MOST). MOST is a higher order of MTM which can be used for both office and field tasks. Reportedly, standards can be developed quite rapidly with this system. Other work measurement techniques are also used, including work sampling and time studies.

The sixth agency, Los Angeles County Public Social Services, attributes a major portion of a 2300 staff savings (out of a total staff of 13,600) to its MTM efforts.

MTM Installations in the Department of Defense (DOD)

A review was made of a 1976 report published by the General Accounting Office (GAO) which covered the Federal government's experience over a period of years with work measurement systems installed to increase productivity in real property management in the military services. Although not specifically stated in the report, it is believed that these are basic MTM systems. The report stated the DOD work measurement systems have become ineffective.

The major problem areas identified in the GAO study are listed below:

- * The engineered performance standards were allowed to deteriorate and become obsolete.
- * Performance standards were used either seldomly or not at all for estimating costs and scheduling work.
- * Work measurement data was not adequately compiled and analyzed to identify and correct the causes of differences between actual performance and standard work performance.
- * Implementing instructions did not require management to use productivity data in preparing budgets and allocating resources.

The report stated that the basic reasons why the DOD work measurement systems became ineffective were:

- * Neither DOD nor the military departments established adequate controls or monitored progress sufficiently to ensure effective implementation of the work measurement systems.
- * There was an apparent lack of management support for the systems - in the form of the low priorities assigned the

program in the beliefs and attitudes of responsible managers.

Agency-wide Productivity Programs

During this audit, discussions were held with representatives of four large city and county governments in California which have agency-wide productivity improvement programs. Each agency representative reported achievement of a level of success with this type of program. Although the program approaches differed to some extent, it was noted that there were three characteristics common to them all. First, each of the agencies has a centralized unit which is responsible for administering its productivity program. Second, the employment requirements for the personnel hired to conduct analytical studies and to develop work standards in the productivity units include graduation from college, and in some cases graduate degrees are required. The third common characteristic of the programs is the firm commitment by both the executive and legislative branches of each agency to the improvement of efficiency in government. It is believed that these three items are key requirements for successful administration of productivity improvement programs.

Two city governments and two county governments in California were contacted. In these large governmental agencies, the scope of the productivity improvement efforts is broad; in some instances the programs involve all departments. In each of these organizations there is a centralized productivity management unit which monitors the overall program. In one of the cities and one of the counties there are also staff analysts in many of the individual departments.

Representatives from these organizations indicated they use a variety of work measurement techniques. With rare exception, the analysts employed are college graduates, some with graduate degrees. It was indicated that the specific college major was not too important, but that employees with analytical ability, a good mathematics background, and interpersonal skills were most successful in this type of work. In these organizations, personnel without specific training and experience in industrial engineering techniques learn the necessary skills primarily through in-house training programs and by working initially with experienced members of the organization.

The work standards which are developed are normally used for scheduling, planning, and budgeting activities of the agency. In some instances, standards developed through the productivity improvement programs are used to directly support the agency's programmed budgeting system. In addition to developing standards, analytical studies are conducted by personnel to improve the systems and procedures being used.

One of the cities makes use of loaned executives from major corporations and other organizations in its program. The executives identify problem areas and then work with personnel from the operating departments and the central productivity management unit in implementing the improvements. This city also makes use of resources available from various State and Federal agencies in its productivity improvement program.

A high degree of success was reported by the personnel who were contacted in these organizations. It is believed that one of the prime reasons for the apparent success of the programs is the firm commitment which has been made in each instance by both the executive and legislative bodies to improving the efficiency of governmental operations. Such a commitment provides the full measure of authority required for the centralized productivity improvement units to effectively conduct studies and implement improvements in all departments.

Proposal to Establish a City-wide Productivity Improvement Effort

The argument in favor of a formal effort to improve productivity throughout the City government of Los Angeles is irrefutable. It is based on a combination of need dictated by severely curtailed resources, and great potential arising from the fact that less than 20 percent of the City work force has been addressed by previous uncoordinated work measurement programs.

To be successful, a major program effort as envisioned by this Office must be:

- * Well-conceived,
- * Fully endorsed and actively promoted by the City's elected officials,
- * Supported as a top priority matter by department managers, and the City Administrative Officer, and
- * Implemented with care.

City Charter Sections 51(8) and 53 assign to the City Administrative Officer the responsibility to recommend to the Mayor and Council regarding "the methods and standards of efficiency in the departments ... and he shall recommend such changes as in his judgment will promote economy and efficiency in the conduct of City government". Consistent with this responsibility, and considering the experience of the City to date and that of other governmental agencies surveyed, this Office proposes, with existing staff, the establishment of a City-wide productivity improvement program as generally described in this section.

Productivity Improvement Defined

There are many variations to be found in the language of definitions applied to the subject of productivity, but the essential concept which underlies the language is that it deals with the use of resources to produce results; and that it is perhaps most accurately expressed as the ratio of input to output. If the ratio can be influenced by enlightened management so that output increases while input is unchanged/decreased, or output remains the same while input is decreased, then productivity may be observed as having improved. Large-scale

productivity improvement generally involves the application of structured scientific management techniques to the process of work production.

Productivity Improvement Effort Goals and Objectives

The primary goal of the proposed effort should be to improve the use of City resources so that one of three results occur:

- a) More service is produced with the same level of resources,
- b) More service is produced with fewer resources,
- c) Same service is produced with fewer resources.

The secondary goal should be to eliminate waste wherever it can be identified.

In furtherance of these goals, many subordinate objectives may be identified to keep the effort on course, including:

- Improving work methods of City forces
- Improving availability of essential equipment and materials
- Development of appropriate measurement systems and productivity indexes
- Development of appropriate monitoring capability
- Integration of the effort with the Budget system of the City

General Characteristics of Proposed Productivity Improvement Effort

The material presented here is intended to provide only general guidance with respect to structure and functional responsibility. It should not be construed as a specific plan for implementation, which is the next logical step in the progression.

Program Policy

Policy setting and guidance for the effort should be provided by the Mayor and Council. Mayor/Council approval of an annual productivity program for the City

is envisioned as a specific policy setting action requirement. The program could be formulated as part of the annual budget process, and could be evaluated in an annual report to the Mayor/Council.

Central Staff Support

A small Productivity Improvement Unit (PIU) should be established within the Office of the City Administrative Officer. It can be staffed utilizing existing City funding and personnel. This Unit would be responsible for the staff support of the effort consistent with the policies established by the Mayor/Council, and accepted principles in the fields of industrial engineering and behavior management.

Departmental Productivity Units (DPU)

There are a number of City departments which, by virtue of size of workforce and activities performed, may be able to justify their own productivity unit. Departmental Productivity Units should be established as an integral part of the total City-wide effort only in such departments. Again, it is foreseen that initially the DPU's could draw from existing City funding and personnel. The primary function of the DPU, as assisted by the centralized PIU, would be to develop, recommend, and assist line management in implementing specific work methods improvements and standards.

EXHIBITS

- A. Recapitulation of Departments with M&S Units
and Positions Assigned.
- B. Historical Summary: M&S Staffing

Recapitulaton: City departments with M&S
Positions Assigned (1979-80)

<u>Department or Bureau</u>	<u>M&S Tech</u>	<u>Senior Tech</u>	<u>Principal Tech</u>	<u>Chief Tech</u>	<u>Total Positions</u>
Street Maintenance	16	4	1	1	22
Recreation & Parks	6	2		1	9
Transportation (Traffic)	3	1			4.
General Services (Fleet Services)	2	1			3
Sanitation		1			1
Street Lighting			1		1
Total Positions	<u>27</u>	<u>9</u>	<u>2</u>	<u>2</u>	<u>40</u>

HISTORICAL SUMMARY

Citywide M&S Staffing

Total Budgeted Positions by Year METHODS AND STANDARDS TECHNICIAN SERIES

<u>Fiscal Year</u>	<u>M&S Tech</u>	<u>Senior Tech</u>	<u>Principal Tech</u>	<u>Chief Tech</u>	<u>Total Positions</u>
1963-64	17	5	2	0	24
1964-65	32	9	2	0	43
1965-66	42	10	2	0	54
1966-67	48	12	2	0	62
1967-68	53	14	2	1	70
1968-69	54	14	3	1	72
1969-70	51	16	3	2	72
1970-71	55	16	3	1	75
1971-72	52	16	3	1	72
1972-73	46	15	3	2	66
1973-74	45	13	2	2	62
1974-75	35	13	1	2	51
1975-76	35	13	2	2	52
1976-77	36	14	2	2	54
1977-78	36	13	3	2	54
1978-79	35	13	3	2	53
1979-80	27	9	2	2	40

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